

# INDEX TO VOLUME XXV.

## NOTE.

1. For authors of papers and for the names of the debaters upon them SMALL CAPS are used.
2. *Italic type* is used for the full titles of papers. Cross references to the subject of a paper which may not be its exact title are in Roman type, as are the titles under the caption of the author's name.
3. The Society is not responsible as a body for the statements of fact or opinion in its papers and discussions.

	PAGE
ADAMSON, D., disc., experiments with a lathe-tool dynamometer.....	682
Air compressors—duplex, valve motion of.....	138
<i>Air-motors and air-hammers, apparatus and method for testing</i> , MAX H. WICKHORST.....	107
ALLEN, BENJAMIN T., construction and efficiency of a Fleming four-valve engine, directly connected to a 400 K. W. generator.....	212
ALLEN, JEREMIAH M., memorial notice of.....	1120
Alloys, report of research committee on effects of strain and annealing....	599
<i>Amendment to the constitution</i> (proposed by FRED J. MILLER).....	428
BAINBRIDGE, EMERSON, disc., rational basis for wages.....	878
BALKWILL, STEPHEN W., disc., is anything the matter with piece-work?..	86
BARR, JACOB NEFF, memorial notice of.....	1120
BARR, JOHN, disc., Middlesborough Dock electric and hydraulic power plant	975
BARRUS, GEORGE, disc., superheated steam and reheaters in compound engines.....	501
BARTH, CARL G., slide rules for the machine shop as a part of the Taylor System of management.....	49
BATES, E. P., disc., is anything the matter with piece-work?.....	84
BEMENT, A., disc., boiler plate, rivet steel, steel castings and forgings, 348; road tests of consolidation freight locomotives.....	586
BENJAMIN, C. H., disc., experiments with a lathe-tool dynamometer.....	677
BERTSCH, J. C., standard unit of refrigeration.....	292
BIRNIE, R., ordnance for the land service.....	355
BLACKALL, ROBERT C., memorial notice of.....	1122
BLANKENSHIP, ROBERT M., memorial notice of.....	1122
BOIES, HENRY M., memorial notice of.....	1122
Boiler plate, report of committee on specifications for.....	321
BOLTON, REGINALD PELHAM, power plant of tall office buildings.....	1011
BRAMWELL, FREDERICK JOSEPH, memorial notice of.....	1123
BRYAN, WM. H., disc., power plant of the tall office buildings, 705; power plant of tall office buildings.....	1037
BULL, STORM, disc., gas-engine testing and proposed standard of comparison, 524; steam turbine.....	769
BUNNELL, STIRLING H., improvement in valve motion in duplex air-com-	

	PAGE
pressors, 138; disc., power plant of the tall office building, 712; standard unit of refrigeration.....	315
<i>Burning of town refuse, GEORGE WATSON</i> .....	1074
 CALDER, JOHN, disc., is anything the matter with piece-work?.....	91
CAMPBELL, WM., Appendix IV. to the VIth Report of the Alloys Research Committee, Effects of Strain and Annealing.....	599
CANNING, WILLIAM PITT, memorial notice of.....	1124
Carnegie gift to engineering (second circular).....	34
Carnegie gift to engineering (third circular).....	437
CARPENTER, R. C., disc., boiler plate, rivet steel, steel castings and steel forgings, 348; Fleming four-valve engine.....	227
<i>Cast-iron, strength, composition, specifications, W. J. KEEP</i> .....	884
CHAMBERS, EDWARD J., disc., gas-engine testing and proposed standard of comparison, 525; rational basis for wages, 880; cast-iron specifications	916
CHILD, E. T., disc, tests of a compound engine using superheated steam..	288
CHURCHWARD, G. J., testing locomotives in England.....	589
CLUETT, A. E., disc., tests of a compound engine using superheated steam.	289
COLES, GEORGE W., disc., power plant of the tall office building, 707; steam turbine .....	775
<i>Commercial gas-engine testing and proposed standard of comparison, WM. P. FLINT</i> .....	509
<i>Compact gas-engine, beam type, C. H. MORGAN</i> .....	245
Compressors, air-valve motion of, duplex.....	138
CONNELL, JAMES A., memorial notice of .....	1126
Constitution, proposed amendment to.....	428
<i>Construction and efficiency of a Fleming four-valve engine directly connected to a 400 K. W. generator, BENJ. T. ALLEN</i> .....	212
CROSBY, W. W., disc., rates and prices for electric power.....	134
CROSTA, L. W., disc., cast-iron specifications.....	918
 DAVENPORT, RUSSELL WHEELER, memorial notice of.....	1126
DAY, CHARLES M., memorial notice of.....	1128
<i>DeLaval steam turbine, E. S. LEA and E. MEDEN</i> .....	1056
<i>Different applications of steam turbines, A. RATEAU</i> .....	782
DINGEE, W. W., disc., boiler plate, rivet steel, steel castings and forgings..	337
Distilling apparatus, series, of high efficiency.....	160
DODDS, ELIHU, memorial notice of.....	1129
DODGE, JAMES M., President's Address, The money value of technical training.....	40
DOHERTY, HENRY L., disc., potential efficiency of prime movers, 939; steam turbine.....	774
DOW, ALEX, disc., steam turbine .....	777
DUBRUL, D. F., disc., is anything the matter with piece-work?.....	87
DUNELL, G. R., disc., refuse destruction by burning .....	1002
Dynamometers, lathe-tool experiments with.....	637
 <i>Effects of strain and of annealing (Appendix IV. to VIth Report of Alloys Research Committee), WM. CAMPBELL</i> .....	599

	PAGE
Electric power, determining prices and rates .....	120
Electric power plant, Middlesborough Dock.....	943
ELLINGTON, E. B., disc., Middlesborough Dock electric and hydraulic power plant .....	970
ELMES, CHARLES F., memorial notice of.....	1129
EMERSON, HARRINGTON, rational basis for wages, 868; disc., is anything the matter with piece-work? 73, 84; experiments with a lathe-tool dynamometer, 676; cast-iron specifications .....	918
EMMET, W. L. R., steam turbine in modern engineering .....	1041
Engines, compound, use of superheated steam and of reheaters in.....	443
Engine, gas, beam type.....	245
"    " commercial testing of and proposed standard of comparison .....	509
"    " steam, compound, test of, using superheated steam.....	264
"    " Fleming four-valve, directly connected to 400 K. W. generator, construction and efficiency of .....	212
ENNIS, W. D., disc., suggestions for shop construction .....	96
<i>Experiments with a lathe-tool dynamometer, J. T. NICOLSON.....</i>	637
FAIRFIELD, H. P., disc., what are the new machine tools to be?.....	104
Fan and engine, direct connected.....	145
FARWELL, E. S., tests of a direct-connected eight-foot fan and engine.....	145
FERGUSON, WM., disc., Middlesborough Dock electric and hydraulic power plant .....	977
FISHER, CLARK, memorial notice of.....	1130
Fleming four-valve engine directly connected to a 400 K. W. generator, construction and efficiency of .....	212
FLINT, WALTER, disc., boiler plate, rivet steel, steel castings and forgings..	346
FLINT, WM. P., commercial gas-engine testing and proposed standard of comparison.....	509
FORSYTH, WM., disc., road tests of consolidation freight locomotives.....	584
FOX, DOUGLAS, testing locomotives in England.....	596
FRASER, DAVID ROSS, memorial notice of .....	1131
GANTT, H. L., modifying systems of management, 63; disc., is anything the matter with piece-work?.....	82
Gas-engine, beam type.....	245
GEOGHEGAN, STEPHEN J., memorial notice of.....	1132
GIFFORD, R. L., disc., power plant of the tall office building.....	713
GOODRICH, W. F., disc., refuse destruction by burning.....	1004
GOSS, W. F. M., a series distilling apparatus of high efficiency, 160; locomotive testing plants, 827; disc., tests of a compound engine using superheated steam .....	289
GREENWOOD, P. J., memorial notice of.....	1133
GREGORY, W. B., the Pitot tube.....	184
HALE, R. S., disc., rates and prices for electric power .....	133
Hammers, air-apparatus and method of testing.....	107
HARRIS, W. R. A., disc., superheated steam and reheaters in compound engines.....	501

	PAGE
HEISLER, CHAS. L., disc., suggestions for shop construction.....	97
HENNING, GUS C., disc., boiler plate, rivet steel, steel castings and forgings.	329
HITCHCOCK, E. A., road tests of consolidation freight locomotive.....	550
HOBART, FRANK G., disc., air-motors and air-hammers.....	117
HODGKINSON, FRANCIS, some theoretical and practical considerations in steam turbine work, 716; disc., steam turbine, 821; potential efficiency of prime movers, 938; steam turbine.....	1055
HULETT, JOHN, memorial notice of.....	1133
HUMPHREY, JOHN, memorial notice of.....	1134
Hydraulic power plant, Middlesborough Dock.....	943
<i>Improvement in valve motion of duplex air-compressors</i> , STIRLING H. BUN- NELL.....	138
<i>Is anything the matter with piece-work?</i> FRANK RICHARDS.....	68
JACOBUS, D. S., tests of a compound engine using superheated steam, 264; disc., gas-engine testing and proposed standard of comparison, 527; potential efficiency of prime movers, 939; series distilling apparatus of high efficiency, 173; standard unit of refrigeration, 316; steam tur- bine.....	774
KEMPSMITH, FRANK, memorial notice of.....	1136
KEEP, W. J., cast-iron, strength, composition, specifications.....	884
KERR, C. V., potential efficiency of prime movers, 920; disc., Fleming four- valve engine, 233; steam turbine, 768; superheated steam and re- heaters in compound engines.....	502
LAFORGE, FREDERICK H., memorial notice of.....	1136
LANZA, G., disc., boiler plate, rivet steel, steel castings and forgings.....	348
LEA, E. S., and MEDEN, E., DeLaval steam turbine.....	1056
LEEDS, PULASKI, memorial notice of.....	1137
LINDSAY, W. W., memorial notice of.....	1138
<i>Locomotive testing plants</i> , W. F. M. Goss.....	827
Locomotives, consolidation freight, road tests of.....	550
“ testing of in England.....	589
MCGEORGE, JOHN, disc., experiments with a lathe-tool dynamometer....	677
M'INTOSH, JOHN F., testing locomotives in England.....	596
Machine tools, speeds, feeds, cuts, etc.....	49
“ “ suggestions for new design.....	100
MAGRUDER, WM. T., disc., experiments with a lathe-tool dynamometer, 682; standard unit of refrigeration.....	316
MARKS, LIONEL S., use of superheated steam and of reheaters in compound engines of large size.....	443
MATHOT, RUDOLPHE, disc., gas-engine testing and proposed standard of comparison.....	529
MATLACK, JOHN RUGAN, JR., memorial notice of.....	1138
MEDEN, E., disc., steam turbine.....	766, 822
Memorial notices of members deceased during the year.....	1120

	PAGE
Memorial of Robert Henry Thurston.....	1113
MESSER, EDGAR HARRISON, memorial notice of.....	1139
<i>Method for determining prices and rates for electric power</i> , F. B. PERRY.....	120
<i>Middlesborough Dock, electric and hydraulic power plant</i> , V. L. RAVEN.....	943
MILLER, EDWARD F., the pressure temperature curve of sulphurous anhydride ( $\text{SO}_2$ ).....	176
MILLER, FRED J., disc., proposed amendment to constitution.....	429
<i>Modifying systems of management</i> , H. L. GANTT.....	63
<i>Money value of technical training</i> , JAMES M. DODGE.....	40
MORGAN, C. H., a compact gas-engine, beam type.....	245
MORSE, W. H., disc., compact gas-engine, beam type.....	261
MOSS, S. A., disc., pressure temperature of sulphurous anhydride.....	182
Motors, air, apparatus and method of testing.....	107
NICOLSON, J. T., experiments with a lathe-tool dynamometer.....	637
NISTLE, G. W., disc., power plant of the tall office building.....	710
Office building, power plant of.....	685, 1011
OLMSTED, FAY DEVEAUX, memorial notice of.....	1140
<i>Ordinance for the land service</i> , R. BIRNIE.....	355
PAJEKEN, JULIUS F., memorial notice of.....	1141
PARKER, CHAS. D., disc., modifying systems of management.....	66
PERRY, FRANK B., a method for determining prices and rates for electric power.....	120
PETTIGREW, W. F., testing locomotives in England.....	591
Piece-work, is anything the matter with?.....	68
PILTON, WM., disc., experiments with a lathe-tool dynamometer.....	678
<i>Pitot tube</i> , W. B. GREGORY.....	184
POLLOCK, ALEXANDER, memorial notice of.....	1142
<i>Potential efficiency of prime movers</i> , C. V. KERR.....	920
<i>Power plant of tall office buildings</i> , R. P. BOLTON.....	1011
“ “ <i>the tall office buildings</i> , J. H. WELLS.....	685
“ electric, determining prices and rates.....	120
<i>President's address, money value of technical training</i> , JAMES M. DODGE....	40
<i>Pressure temperature curve of sulphurous anhydride (<math>\text{SO}_2</math>)</i> , E. F. MILLER..	176
Proceedings of the Chicago (49th) Meeting.....	421
Proceedings of the New York (48th) Meeting.....	3
RANDOLPH, CLYDE F., memorial notice of.....	1142
RANDOLPH, L. S., disc., boiler plate, rivet steel, steel castings and forgings.	346
RATEAU, A., different applications of steam turbines.....	782
<i>Rational basis for wages</i> , HARRINGTON EMERSON.....	868
RAVEN, VINCENT L., <i>Middlesborough Dock electric and hydraulic power plant</i> .....	943
REARICK, CHAS. B., disc., steam turbine.....	1072
REAY, T. P., disc., testing locomotives in England.....	597
REEVE, S. A., disc., compact gas-engine, beam type, 255; potential efficiency of prime movers, 935; standard unit of refrigeration.....	313

	PAGE
Refrigeration, standard unit of. ....	292
<i>Refuse destruction by burning and utilization of heat generated</i> , C. NEWTON RUSSELL. ....	982
Refuse, town, burning of. ....	1074
Reheaters, use of in compound engines of large size. ....	443
Report of committee on specifications of boiler plates, rivet steel, steel castings and steel forgings. ....	321
RICE, C. W., disc., potential efficiency of prime movers. ....	939
RICE, R. H., disc., tests of a compound engine using superheated steam. ....	286
RICHARDS, FRANK, is anything the matter with piece-work? . ....	68
RICHES, T. H., testing locomotives in England. ....	597
RICHMOND, GEORGE, memorial notice of. ....	1143
RIGGS, JOHN D., disc., what are the new machine tools to be? . ....	103
<i>Road tests of consolidation freight locomotives</i> , E. A. HITCHCOCK. ....	550
ROBINSON, S. W., disc., the pitot tube. ....	208
ROCHE, JOHN A., memorial notice of. ....	1145
ROCKWOOD, GEO. I., disc., Fleming four-valve engine, 230; power plant of the tall office building, 709; steam turbine, 771; superheated steam and reheaters in compound engines, 503; tests of a compound engine using superheated steam. ....	285
RUSSELL, C. NEWTON, refuse destruction by burning, and the utilization of heat generated. ....	982
SAXON, ALFRED, disc., burning of town refuse, 1107; Middlesborough Dock electric and hydraulic power plant. ....	977
SCHEFFLER, F. A., suggestions for shop construction. ....	93
SCHNERLE, R. G., disc., is anything the matter with piece-work. ....	81
<i>Series distilling apparatus of high efficiency</i> , W. F. M. GOSS. ....	160
SEYMOUR, J. A., disc., Fleming four-valve engine. ....	233
SHIPLEY, THOS., disc., standard unit of refrigeration. ....	312
<i>Shop construction</i> , F. A. SCHEFFLER. ....	93
Shop management, is anything the matter with piece work? . ....	68
“ “ modifying systems of management. ....	63
“ “ slide rules for the machine shop as a part of the Taylor system of management. ....	49
SLACK, JOHN RUGGLES, memorial notice of. ....	1145
<i>Slide rules for the machine shop as a part of the Taylor system of management</i> , CARL G. BARTH. ....	49
SMART, LEWIS A., disc., refuse destruction by burning. ....	1001
SMITH, OBERLIN, disc., is anything the matter with piece-work, 83, 89; what are the new machine tools to be? . ....	105
SNELL, HENRY I., memorial notice of. ....	1146
<i>Some theoretical and practical consideration in steam turbine work</i> , FRANCIS HODGKINSON. ....	716
SOULE, R. H., disc., proposed amendment to constitution. ....	429
SPANGLER, H. W., disc., boiler plate, rivet steel, steel castings and forgings. ....	349
<i>Standard unit of refrigeration</i> , J. C. BERTSCH. ....	292
Steam, superheated, tests of a compound engine using. ....	264
“ “ use of in compound engines of large size. ....	443

	PAGE
<i>Steam turbine in modern engineering</i> , W. L. R. EMMET.....	1041
Steel, rivet, castings, forgings, report of committee on specifications for...	321
Sulphurous anhydride (S O <sub>2</sub> ) pressure temperature curve of .....	176
SUPLEE, H. H., disc., compact gas-engine, beam type, 261; power plant of the tall office building, 711; rational basis for wages, 881; series distilling apparatus of high efficiency, 173; steam turbine, 775; suggestions for shop construction. ....	99
SWEET, JOHN E., what are the new machine tools to be?.....	100
TAYLOR, FRED W., disc., is anything the matter with piece-work? 85, 89; what are the new machine tools to be?.....	105
Technical training, money value of .....	40
Testing locomotives in England .....	589
Testing plants, locomotive. ....	827
<i>Tests of a compound engine using superheated steam</i> , D. S. JACOBUS .....	264
<i>Tests of a direct-connected eight-foot fan and engine</i> , E. S. FARWELL .....	145
THWAIT, B. H., disc., compact gas-engine, beam type. ....	258
THURSTON, ROBERT HENRY, a memorial .....	1113
THURSTON, R. H., a tribute to .....	32
TRUMP, EDWARD N., disc., burning of town refuse. ....	1108
Turbine, steam, DeLaval. ....	1056
“ “ in modern engineering.....	1041
“ “ some theoretical and practical considerations on.....	716
Turbines, “ different applications of. ....	782
UEHLING, E. A., disc., compact gas-engine .....	261
<i>Use of superheated steam and of reheaters in compound engines of large size</i> LIONEL S. MARKS. ....	443
Valve motion of duplex air-compressor. ....	138
VOORHEES, GARDNER T., disc., standard unit of refrigeration .....	304
Wages, rational basis for. ....	868
WALDRON, F. A., disc., steam turbine .....	765
WALLACE, WILLIAM, memorial notice of .....	1146
WATSON, GEORGE, burning of town refuse .....	1074
WEBBER, SAMUEL, disc., potential efficiency of prime movers .....	938
WELLS, JAMES HOLLIS, power plant of a tall office building .....	685
WEST, THOMAS D., disc., cast-iron specifications .....	915
<i>What are the new machine tools to be?</i> JNO. E. SWEET.....	100
WICKHORST, MAX H., air-motors and air-hammers; apparatus and methods for testing. ....	107
WICKSTEED, CHARLES, disc., refuse destruction by burning .....	1000
WICKSTEED, J. HARTLEY, disc., burning of town refuse, 1106; experiments with a lathe-tool dynamometer, 680; rational basis for wages .....	881
WORTHINGTON, EDGAR, disc., locomotive testing plants.....	865
WRIGHT, JOHN Q., memorial notice of .....	1147